Assignment -3

Python Programming

Assignment Date	18 October 2022
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Maximum Marks	2 Marks

Answer the questions or complete the tasks outlined in bold below, use the specific method described if applicable.

Question-1:

What is 7 to the power of 4?

Solution:

```
Num=pow(7,4)
Print(Num)
```

Question-2:

Split this string: s = "Hi there dad!" into a list.

Solution:
```
s = "Hi there dad!"
output = s.split()
print(output)
```

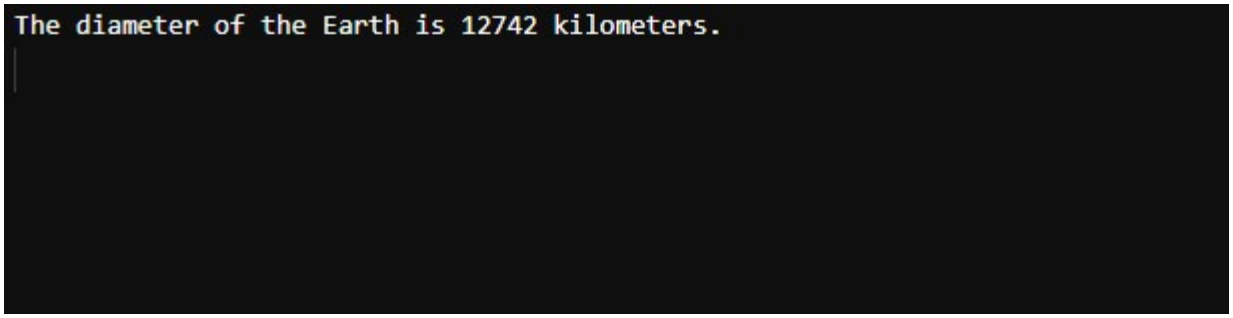
Question-3:

Given the variables:

planet = "Earth"
diameter = 12742

Use .format() to print the following string:
The diameter of Earth is 12742 kilometers.

Solution:
```
res = "The diameter of the {planet} is {diameter} kilometers."
print(res.format(planet = "Earth",diameter = 12742))
```



Question-4:

Given this nested list, use indexing to grab the word "hello"

Solution:
```
lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]
lst[3][1][2]
```

Question-5:

Given this nest dictionary grab the word "hello". Be prepared, this will be annoying/tricky

Solution:
```
d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
d['k1'][3]['tricky'][3]['target'][3]
```

Question-6:

What is the main difference between a tuple and a list?

Solution: print("list can be modified where as tuple can not be modified")

```
list can be modified where as tuple can not be modified
```

Question-7:

Create a function that grabs the email website domain from a string in the form: user@domain.com

So for example, passing "user@domain.com" would return: domain.com

Solution:

```
def domain(inp):
    temp = inp.split('@')
    print(temp[1])
inp = input()
domain(inp)
```

```
user@domain.com
domain.com
```

Question-8:

Create a basic function that returns True if the word 'dog' is contained in the input string. Don't worry about edge cases like a punctuation being attached to the word dog, but do account for capitalization.

Solution:

```
from logging import fatal
def contain(inp):
        temp = inp.split(" ")
        com = ['d','o','g']
        flag = -1
        for i in temp:
                if(len(i)==3 or len(i)==4):
                for j in range(len(i)):
                        if(i[j] != com[j]):
                                break
                        elif(j == len(com)-1):
                                return True
        return False
inp = input()
print(contain(inp))
```

Question-9:

Create a function that counts the number of times the word "dog" occurs in a string. Again ignore edge cases.

Solution:

```
def contain(inp):
    com=['d','o','g']
    temp = inp.split(" ")
    count = 0
    for i in temp:
        if(len(i) == 3 or len(i)== 4):
        for j in range(len(i)):
            if(i[j] != com[j]):
                break
            elif(j == len(com)-1):
                count +=1
    return count
inp = input()
print(contain(inp))
```

Question-10:

You are driving a little too fast, and a police officer stops you. Write a function to return one of 3 possible results: "No ticket", "Small ticket", or "Big Ticket". If your speed is 60 or less, the result is "No Ticket". If speed is between 61 and 80 inclusive, the result is "Small Ticket". If speed is 81 or more, the result is "Big Ticket". Unless it is your birthday (encoded as a boolean value in the parameters of the function) -- on your birthday, your speed can be 5 higher in all cases.

Solution:

```
def caught_speeding(speed, is_birthday):
    if is_birthday:
        speeding = speed - 5
    else:
        speeding = speed

    if speeding > 80:
        return 'Big Ticket'
    elif speeding > 60:
        return 'Small Ticket'
    else:
        return 'No Ticket'
print(caught_speeding(85,False))
print(caught_speeding(85,True))
```

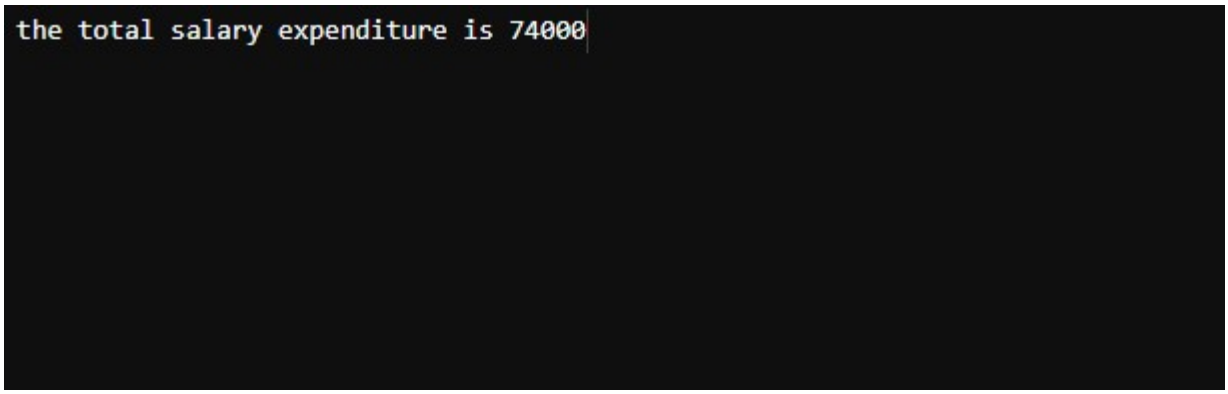
```
Big Ticket
Small Ticket
```

Question-11:

Create an employee list with basic salary values(at least 5 values for 5 employees) and using a for loop retreive each employee salary and calculate total salary expenditure.

Solution:

```
salary = [12000,13000,14000,15000,20000]
total_exp = 0
for i in salary:
        total_exp+=i
print("the total salary expenditure is {value}".format(value=total_exp))
```



Question-12:

Create two dictionaries in Python:

First one to contain fields as Empid, Empname, Basicpay

Second dictionary to contain fields as DeptName, DeptId.

Combine both dictionaries.

Solution:

```
dict1 = {'employ' : ['Empid','Empname','Basicpay']}
dict2 = {'emp' : ['DeptName','DeptId']}
dict1.update(dict2)
print('Updated dictionary:')
print(dict1)
```